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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/721,583

Filing Date: November 24, 2003

Appellant(s): MITCHELL ET AL.

Doyle B. Johnson
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 12, 2010 appealing from the Office action mailed November 12, 2009.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1,2,4-10,12,15,19,22,24,33-41,66-72 are pending and rejected in the application.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

US 20030126850 A1	BROWN	6-2003
US 6298865	BROWN et al.	10-2001
US 6626192	GARCIA, Jr. et al.	9-2003
US 20040787465 A1	TARANTINO et al.	9-2004
US 6112429	MITCHELL et al.	9-2000
US 6223502	CRESS et al.	5-2001
US 5566695	LEVEY et al.	10-1996
US 20030217650	HERERRA	11-2003
US 5316778	HOUGHAM	5-1994

US 3814820	BUSTA	6-1974
US 2666711	CROSSETT	1-1954
US 1708253	BELL et al.	4-1929
US 5130152	ALAMEDA	7-1992
US 5711980	TERRY	1-1998
US 2644473	FOX et al.	7-1953

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 1,2,4, 5,7,19,22,66-69 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown (US 20030126850 A1) in view of Brown et al. (US 6298865), Garcia, Jr. et al. (US 6626192), Tarantino et al. (US 20040187465 A1), Mitchell et al. (US 6112429), Cress et al. (US 6223502) and Levey et al. (US 5566695), for the reasons given in the previous Office Action, mailed February 5, 2009.

Regarding claim 1, Brown '850 teaches cutting and then removing the core from lettuce heads (paragraph 0005 and 0009) and placing the de-cored lettuce into a tote/container (paragraph 0011, 0050), with the lettuce being washed while in the tote/container. Regarding the flow of the washing fluid for cleaning the de-cored lettuce, Brown '850 teaches nozzles arranged in rows or any arrangements above and below the container so that the spray sprays both upward and downward (paragraph 0042 and 0043). In paragraph 0050, Brown '850 teaches that the sap is allowed to drain from the bottom of the tote as well. Therefore, the nozzle sprays from above and below would thus have flowed through the de-cored end of each product, since the lettuce is positioned to allow for draining of the sap from the bottom of the tote. Brown '850 also teaches drying by vibration, while the produce is in the container that was used to wash the produce (paragraph 0046) and further teaches transport of the produce in those same containers (paragraph 0045), and thus teaches appellants' concept of washing and drying without additional handling of the produce in between the washing and drying steps. It is noted that claim 1 does not recite any step of transporting while in the containers. It is additionally noted that Garcia Jr. et al. also teach removing the core for

easier cleaning of lettuce (column 4, line 64 to column 5, line 10) and thus further evidences that it has been conventional to remove the core of lettuce, for easier cleaning of the lettuce. Additionally, Tarantino et al. also teach removing the core and retaining the whole head nature of the lettuce (paragraph 0046). Regarding the positioning of the de-cored produce, it is noted that the claim is not specific as to what side of the tote the de-cored ends face. Thus, by teaching the de-cored ends facing the bottom of the container/tote, Brown '850 teaches that the de-cored products are facing a first side of the tote. Regarding the limitation in claim 1 of placing a plurality of de-cored products into the tote, clearly since Brown '850 teaches loading de-cored lettuce into totes, it would have been obvious that a plurality of de-cored lettuce would have been placed into the totes, especially since the nozzles for cleaning the lettuce should also clean the de-cored portion. The nozzles for cleaning the de-cored lettuce can be in rows but the figures are not clear as to the particular arrangement of the de-cored lettuce within the totes.

Claim 1 differs from Brown '850 in reciting that the plurality of products are placed in a first row of the tote with de-cored ends of the product in the first row facing a first side of the tote. The de-cored ends would inherently have faced a side of the container, such as the bottom of the container for the purpose of positioning the de-cored product to exude the sap, prior to washing, as discussed above. Brown '850 does not explicitly teach placing the de-cored products into a row. Nevertheless, Brown et al. '865 teaches wherein the de-cored lettuce are all aligned in a row and correspond to the spray nozzles, also aligned in a row, for the purpose of cleaning the de-cored

lettuce (column 2, lines 35-42). In addition, Mitchell et al. teaches that it has been conventional in the art to place de-cored produce into a container in rows, as shown in figure 2B. Mitchell et al. also teach washing the lettuce while in rows, as shown in figure 9B. It is further noted that Brown '850 teaches that the nozzles that are used to wash the de-cored produce are aligned in a row (Paragraph 0043). Garcia Jr. is cited as further evidence that it was conventional to align de-cored lettuce heads (column 4, line 64 to column 5, line 10) for the purpose of allowing the cleaning sprays to flow through the de-cored portions. Levey et al. has been relied on as a general teaching that it has been conventional to align articles in rows and face the flow of fluid for the purpose of cleaning the interior of the articles (see figure 4). To therefore align the de-cored produce into rows so as to correspond with the aligned rows of washing nozzles would have been obvious to one having ordinary skill in the art, for the purpose of providing adequate washing of the cored produce. Clearly, when the washing fluid from the nozzles is aligned with the cores, more fluid would be able to flow into the cores and thus facilitate cleaning of the cores.

Claim 1 further incorporates those limitations of (now cancelled) claims 16-18. Specifically, claim 1 recites cleaning the de-cored products in the tote by immersing the tote in a wash tank for cleaning, wherein the wash tank comprises a flow of washing fluid in a direction toward the de-cored ends of the products, such that the first side of the tote faces the direction of flow of washing fluid, whereby the flow of washing fluid flows through the de-cored ends of each product to an opposite end of each product.

Regarding this limitation, it is noted that Brown '850 already teaches washing de-cored lettuce wherein the de-cored lettuce has been placed such that the latex within the de-cored section is allowed to flow from the cut portions. Brown '850 teaches cleaning by placing the tote on a conveyor (paragraph 0014) that carries the tote through a wash tank (paragraph 0043). Since Brown '850 does not teach any intrusive method for removing the latex, it would have been obvious that the de-cored lettuce would have required gravity, for instance, to facilitate "bleeding." Furthermore, Brown '850 teaches that the totes have holes throughout for the purpose of allowing the sap that has been bled to drain through the bottom, thus teaching that the de-cored lettuce are arranged against a side, such as the bottom of the container (paragraph 0050). As a further method for washing the de-cored lettuce, Brown '850 teaches using upward and downward sprays but also teaches submersion of the containers in a liquid. Since Brown '850 teaches employing a conveyor/chain drive for allowing the totes to sit on the conveyor and move through the wash station and even teach employing a submersion tank, it would have been obvious to one having ordinary skill in the art to have employed another conventional washing technique, such as submersion for the purpose of washing the de-cored lettuce contained within the totes.

Regarding the wash tank comprising a flow of washing fluid in a direction toward the de-cored ends of the products, it is noted that since the products are de-cored, that when submerging it would have been obvious to one having ordinary skill in the art that the washing liquid would have flowed through the de-cored ends of the products. By

submerging a product having a core removed therefrom, clearly fluid would have flowed there-through.

Regarding claims 2, Brown '850 teaches removing the core, and thus cutting off the core (Paragraph 0041). Regarding claim 5, which recites retaining the whole head nature of the product, it is noted that Brown '850 teaches trimming to only remove the core (paragraph 0041) of lettuce therefore the whole head nature of lettuce would have been retained, especially since Brown '850 teaches spraying from above and below to clean the de-cored lettuce. Brown '865 also teach cutting to remove the core of lettuce which thus retains the whole head nature. Regarding claim 7, Brown teaches removing the core, and thus another device would inherently have been used in order to remove the core.

Regarding claim 4, which recites removing and placing at a processing plant, it is noted that Brown '850 essentially teaches a processing plant. Appellant has not defined this limitation and therefore since Brown '850 teaches the de-coring, washing, and drying in a single location, it is noted that this location is considered a processing plant. In any case, it is noted that once it was known to perform the de-coring and then placing of the de-cored products into a tote and wash and dry within the same tote, without unloading, the particular location to perform these steps would not have provided a patentable feature over the prior art.

Regarding claim68, Brown '850 teaches cleaning by placing the tote on a conveyor (paragraph 0014) that carries the tote through a wash tank (paragraph 0043).

Regarding instant claim 19, Brown '850 teaches a conveyance device to carry the tote through the cleaning tank (paragraph 0042).

Claim 22 recites drying by spin drying the product in the tote. It is noted that Brown '850 already teach removing the excess water (i.e. drying) by using vibration (paragraph 0046). Mitchell et al. has been relied on to teach spin drying while the product is in the tote. Mitchell et al. teaches an arrangement of the produce within the container which is advantageous for spin drying. Since the combination already teaches washing and drying while in the same container, and further teaches arranging the de-cored produce into a plurality of rows, employing such an arrangement would further have been advantageous for the purpose of employing spin drying to remove moisture therefrom, since spin drying would have employed centrifugal forces to remove the moisture from the produce.

Claim 69 is rejected for the reasons given above with respect to claim 1, regarding the cutting, removing and placing. Regarding the limitation of immersing the tote into a wash tank, it is noted that Brown '850 teaches submerging the tote in the wash tank (paragraph 0043). By submerging de-cored lettuce, clearly the washing fluid would flow through the de-cored ends. Regarding the first side of the tote facing a direction of conveyance, Brown' 850 also teaches that the nozzles may be arranged in rows or any arrangement that adequately washes the trimmed produce. To therefore re-orient the produce so that the de-cored ends face a first side which is in the direction of conveyance would have been an obvious matter of design. Additionally, it is noted that in paragraph 0043, Brown '850 teaches that the totes sit on the conveyor and may

move through the wash station. Brown '850 further teaches that the tote can be submerged in liquid. If the conveyor is moving in a downward direction into the submerging tank, then a face of the tote would also face a direction of conveyance (i.e. into a submerging tank).

Claim 66 recites that a first row of de-cored product is placed in the tote with the de-cored ends of the first row facing a first side and a second row of de-cored products with the de-cored ends of the products in the second row facing a second side of the tote. It is noted that the combination as applied to claim 1 already teaches spraying de-cored lettuce with a washing solution so that the solution would pass through the de-cored portions. Mitchell has been relied on to teach that it has been conventional in the art to wash two rows of produce with the flow of the washing solution flowing along the axial length of the produce. As can be seen from figure 2B, the produce is placed into the tote in two rows with the end of each product facing a different side of the tote. The combination as applied above, already teaches washing de-cored produce within a tote, which has a spraying solution passing through the de-cored ends. The only difference being the particular number of rows (which the combination does not clearly depict) and the particular orientation of the rows. Tarantino et al. has been further relied on to teach that it was conventional in the art to have a horizontal spray (figure 3c) for the purpose of treating both the de-cored end and the top end of whole head produce such as lettuce. To therefore modify the combination and place the de-cored lettuce into two rows, with each row facing a different side of the tote would thus have been an obvious matter of choice and/or design, since the art taken as a whole already teaches the flow

of water from two opposite directions to clean the de-cored portion of whole head produce, and since the art also teaches the placement whole head produce in "horizontal" rows. It is further noted that Brown '850 teaches washing within a tote, and a drying type step within the same tote (paragraph 0045-0046) and then transporting the produce within the same totes using transport trucks. The reference to Cress et al. has also been cited as additional evidence that it has been conventional to wash and dry items in the same container without removing or handling the items between the washing and drying steps. Therefore, the art taken as a whole teaches that it has been conventional in the art to process (wash, dry and transport) de-cored produce within a tote.

Regarding the particular arrangement of the de-cored produce, as claimed, it is noted that Mitchell et al. teaches placing into a tote in rows for the purpose of employing centrifugal drying to remove excess water (see figure 2a and 2b, item 30 and column 3, lines 37-54). It would thus also have been advantageous to employ two rows in the washing and drying and transport operation so that a centrifugal drying step can be employed, as taught by Mitchell, (instead of vibrational drying). It is noted that Brown '850 does not handle the produce between the washing and drying steps, since the produce remains in the tote. Since Mitchell teaches employing centrifugal drying for drying the claimed arrangement of produce while the produce remain in the totes, to therefore modify the combination and arrange the de-cored produce in the totes of the previously applied combination into two rows, such as the totes taught by Mitchell et al.,

would have been obvious for the purpose of continuing to process (wash, dry and transport) within the same tote, while being able to use a centrifugal dryer.

Claim 67 recites that the flow of washing fluid is from a first flow directed to a first side and a second flow directed to a second side. It is noted that Brown '850 teaches a first and second flow directed to a first and second side of the tote (upward and downward). Mitchell et al. and Tarantino also teach flow from a first and second side (see figure 9b of Mitchell et al. and figure 3c of Tarantino et al.).

2. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 1,2, 4, 5, 7, 19, 22, 66-69, above, and in further view of Herrera (US 20030217650).

Claim 6 differs from the above combination in specifically reciting wherein the device to cut out the core of the product is a stainless steel knife. Nevertheless, Mitchell et al. disclose wherein the core is removed or trimmed (Column 3, Lines 31-32). Herrera teaches a method for harvesting and coring produce such as lettuce (Paragraph 0004) using a cutting element comprised of steel or steel alloy (Paragraph 0079). Therefore, Herrera teaches that it has been well established in the art and thus would have been obvious to the ordinarily skilled artisan to use a cutting edge to remove the cores of the lettuce. Using a steel alloy cutting element as taught by Herrera would have provided consistency in the removal of the core from each of the lettuce heads. Although Herrera does not explicitly teach stainless steel, it would have been obvious to one having ordinary skill in the art that steel alloys encompass stainless

steel. Nevertheless, in cutting food products it would have been within the knowledge of the ordinarily skilled artisan and thus obvious to the ordinarily skilled artisan to use a stainless steel cutting edge since stainless steel cutting devices do not stain, corrode or rust, thus preventing contamination to the food product being cut.

3. Claims 8-10, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 1, 2, 4, 5, 7, 19, 22, 66-69, above, and in further view of Hougham (US 5316778), Busta (US 3814820), Crossett (US 2666711), Bell et al. (US 1708253) and Alameda (US 5130152).

Claims 8-10 differ from the above combination in specifically reciting pre-washing the cut product prior to placing in the tote. Claim 8 recites "the cut product." It is noted that this only refers to the product after it is cut from the stalk, and not a de-cored product. Furthermore, claim 9 recites "at least one end of the product before placement in the tote." This reads on any end and not even a de-cored end. Hougham, Busta, Crossett, Bell et al. and Alameda have been relied on to teach that the art is replete with examples of treating produce by employing more than one washing step. For example, Hougham teaches the step of pre-washing with subsequent washing, drying and other processing steps, while the produce is within a container(figure 1, and column 2, lines 16-22 and lines 30-40 and lines 46-48 and lines 50-55). Busta also teaches two washing steps. That is, Busta teaches a pre-washing step (column 1, lines 50-54 - "Step 1") and a subsequent "washing step" (column 3, lines 12-25 - "Step 3") for produce such

as lettuce (column 2, lines 34-46). See also Busta, column 2, lines 1-10, which teaches two washing steps. Crossett teaches two washing steps for produce (see figure 1, items 14 and 22). Bell et al. teaches first bunching produce and then dousing with water (i.e. pre-washing) (page 1, lines 76-85) prior to placing into a container and then undergoes further processing while in the container (page 1, lines 76-85). Alameda also teaches a first washing step (see figure 3-5 "Washer") and column 5, lines 41-42) with a subsequent water immersion step (column 6, lines 1-25 and figures 4-5 - "water dip"). These references have been relied on to teach that the art is replete with examples of treating produce by employing more than one washing step. To therefore modify the combination and employ a pre-washing step would have been obvious to one having ordinary skill in the art for providing an initial cleaning of the produce prior to the de-coring and washing, for instance. Clearly, it would have been obvious to the ordinarily skilled artisan, that pre-washing would further have facilitated removal of any contaminants from the produce. Such a modification would have also loosened dirt and other contaminants, thus resulting in efficient cleaning during the washing step. This is a similar concept to pre-scrubbing dirty dishes before placing in the dishwasher so as to ensure complete cleaning of the dish. Even further, since Hougham teaches the concept of pre-washing, whether the claimed pre-wash was performed prior to or after placement within the tote would not have provided a patentable feature over the prior art, since Hougham teaches the concept of pre-washing for the removal of the accumulation of dirt, a bacteriocidal effect and extending the shelf life of the product by adding moisture prior to processing the lettuce at a processing plant.

Regarding claim 10, Brown '850 already teaches spray washing the product while in a tote, and a drying step within the same tote (paragraph 0045-0046) and then transporting the produce within the same totes using transport trucks (paragraph 0045).

Claim 12 is rejected for the reasons given above with respect to claim 5.

Claim 15 recites that the de-cored products are placed in multiple stacked rows on top of each other within the tote. It is noted that the claim is not specific as to whether the totes have multiple rows on top of each other through the entire processing. For instance, the claim still reads on stacking multiple rows in the tote, only upon drying. In any case, as discussed above with respect to claims 66 and 67, Mitchell, Tarantino and Cress et al. provide motivation for multiple rows of products. Totes, such as those taught by Mitchell et al. clearly would have been capable of stacking multiple rows of products. The combination as applied to claims 66 and 67 teach that it would have been obvious to have employed totes such as those taught by Mitchell for the purpose of employing spin drying. Since the combination already teaches processing (washing and drying) without removing the product from the tote, to modify the combination and therefore wash multiple rows of de-cored products stacked on top of one another would have been obvious to one having ordinary skill in the art, for the purpose of maximizing the efficiency of the washing and drying process.

4. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 1, 2, 5, 7, 19, 22, 66-69, above and in further view of Terry (US 5711980).

Claim 24 recites that the temperature during processing achieves a product temperature of between 33-38°F. Brown '850 does not teach the particular operating temperature. Nevertheless, it is noted that Mitchell et al. teaches using a temperature of between 33-40°F (Column 5, Lines 5-7) for the washing of the produce but is silent in teaching maintaining the temperature of between 33 and 38°F throughout the entire process. Terry teaches maintaining a "cool" temperature (Column 1, Lines 43-51) throughout the processing of the produce for the purpose of preserving the marketable life of the produce (Column 1, Lines 25-39). On column 2, lines 17-19 and lines 30-34, Terry teaches a constant temperature throughout processing of 35°F. Terry teaches that maintaining a lowered temperature through processing aides in extending the useful marketable life of produce therefore it would have been obvious, based on these teachings, to operate the processing equipment of modified Mitchell et al. at 35°F for the purpose of extending the useful marketable life of the produce.

5. Claims 33-36, 40-41, 70-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 1, 2, 5, 7, 19, 22, 66-69, above and in further view of Hougham (US 5316778).

Claims 33 and 70 are essentially rejected for the reasons given above with respect to claims 1 and 66.

Claims 33 and 70 differ from the previously applied combination in specifically reciting the step of pre-washing the de-cored product. It is noted that the claim does not limit when the product is pre-washed.

In any case, Hougham teaches the step of pre-washing de-cored lettuce leaves by first spraying with a solution of fresh water and chloride to remove natural latex milky substance generated from the leave (Column 2, lines 17-23). Hougham further teaches that the first wash adds moisture to the leaves and increases the shelf life of the vegetable and also kills bacteria while also removing dirt and debris which accumulated on the product due to field handling (column 2, lines 24-29). After the pre-washing, Hougham subsequently places the tote within a washing step at the processing facility to remove insects, dirt and other debris which remains attached to the product following field processing (column 2, lines 40-42). Therefore, it would have been obvious to one having ordinary skill in the art to modify the combination and pre-wash the de-cored lettuce, as taught by Hougham for the purpose of removing the dirt and debris which accumulated during field handling. Also, such a modification would have extended the shelf life by adding moisture and also providing a bactericidal effect.

Further regarding the step in claim 33 of transporting the tote to a processing facility, it is noted that appellant's have not defined what can be considered a processing facility. As an example appellants indicate in the abstract that the processing facility includes a washing tank. It is noted that, via a conveyor, Brown '850 teaches transporting the loaded tote to a processing facility and then immersing the tote

in a washing fluid and also conveying the tote through the washing fluid, as discussed with respect to claim 69.

Regarding the limitation in claim 33 of loading the tote into a spin dryer without re-loading, it is noted that Brown '850 already teach using a vibration clapper (paragraph 0046) while the products are still in the tote. Mitchell et al. has been relied on as discussed above with respect to claims 66 and 67 to teach using a spin dryer. To therefore modify the combination and place the products in a spin dryer would have been an obvious matter of choice and/or design to one having ordinary skill in the art, since the combination already teaches moving from washing to drying without reloading. Regarding claim 34, which recites packaging the dried de-cored product, Mitchell et al. teaches packaging after drying (figure 1, item 20). To therefore modify the combination and package after drying would have been obvious to one having ordinary skill in the art, for the purpose of marketing/selling the de-cored, washed, dried and packaged produce.

Claim 35 recites that the washing fluid is one of chilled water, chloride and an anti-bacterial agent. Mitchell et al. teach using chilled water (Column 5, Lines 1-12), and the Brown references similarly teach using an aqueous wash.

Regarding claim 36, the combination already teaches transporting using a conveyor belt. Regarding the limitation of covering an open top end of the tote with a second conveyor belt and maintaining registration of the tote with both conveyor belts, it is noted that Mitchell et al. teaches the concept of maintaining registration of the produce with a first and second conveyor (Figure 9B) and using the two conveyor belts

to prevent bobbing of the produce while submerged. Since Brown '850 teaches using a submersion tank, to therefore modify the combination and employ a second conveyor belt on top of the tote would have been obvious for the purpose of preventing bobbing of the tote.

Regarding claim 40, Brown '850 teaches a conveyor that would transport the tote through the washing tank. Regarding claim 41, since Brown '850 teaches cleaning the de-cored products, by placing into a washing tank (i.e. submersion) the flow of washing fluid would have been directed at the de-cored ends for the purpose of cleaning the produce.

Claim 71 is rejected for the reasons given above with respect to claim 66. Claim 72 is rejected for the reasons given above with respect to claim 67.

6. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 33-36,40-41,70-72 above, and in further view of Fox et al. (US 2644473).

Claim 37 recites that the conveyor belt has latches or stops to maintain registration of the tote with the conveyor belt. It is noted that Mitchell et al. teach using two conveyor belts for pressing the product there-between against both conveyors for the purpose of maintaining registration of the product with the conveyor. Additionally, Fox et al. teach a basket that is inter-engaged with the conveyor (figure 9). Figure 9 shows the basket recessed into the conveyor and with cross bars that extend across the protrusions in the conveyor for holding the basket thereon. To therefore modify the

combination and provide some securement structures for retaining a container on the conveyor belt would have been obvious to one having ordinary skill in the art, for its art recognized and appellant's intended function.

7. Claims 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 33-36, 40-41, 70-72, above, and in further view of Hougham (US 5316778), Busta (US 3814820), Crossett (US 2666711), Bell et al. (US 1708253) and Alameda (US 5130152).

Claims 38 and 39 are rejected for the reasons given above with respect to claims 8 and 9.

8. Claims 1, 2, 4, 5, 7-10,12, 15, 19,22, 33-41 and 66-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell et al. (US 6112429) in view of Hougham (US 5316778) and in further view of Brown (US 20030126850), Brown et al. (US 6298865), Garcia, Jr. et al. (US 6626192) and Tarantino et al. (US 20040187465 A1). Cress et al. (US 6223502) and Levey et al. (US 5566695) has been relied on as evidence.

Regarding claim 1, Mitchell et al. teach cutting a product from a stalk (column 1, lines 19-25), removing the core (column 3, lines 31-32). Mitchell et al. also teach cleaning a product cut from a stalk.

Claim 1 differs in specifically reciting that the product is first de-cored, then placed in the tote and then cleaned.

Brown '850 teaches de-coring a product and then placing the product in a tote and then cleaning and drying the product within the tote, without removing the product from the tote. As a result, the washing, drying and transporting of the cut product is clearly simplified. Regarding de-coring, Brown '850 teaches that coring the lettuce in the field eliminates most of the waste leaves and cores, thereby reducing the bulkiness of the product during shipment. Brown '850 further teaches that coring of the lettuce means only 100 percent usable lettuce leaves are shipped when the lettuce head is cored in the field (paragraph 0008). In addition, Brown '850 teaches that first cutting and coring the lettuce allows the lettuce to bleed excess sap prior to washing. As a result, the sap or latex exudates is removed from the product, thus resulting in a more appealing lettuce product (Paragraph 0009). Brown '850 also teach washing the de-cored head, as discussed above. Based on these teachings, it would have been obvious to one having ordinary skill in the art to remove the core of the lettuce of Mitchell et al., prior to washing for the purpose of removing the undesirable latex exudates and further for only providing 100 percent usable lettuce leaves. Such a modification would have provided a more appealing product while also reducing the bulkiness of the product and also removing any accumulated dirt or exudates from within the core. Brown et al. '865 also further teaches spraying a washing fluid through the holes (column 2, lines 35-41) thus removing any additional accumulated dirt or remaining latex exudates within the core. It is noted that Garcia Jr. et al. also teach

removing the core for easier cleaning of lettuce (column 4, line 64 to column 5, line 10).

Tarantino et al. also teach removing the core and retaining the whole head nature of the lettuce (paragraph 0046).

In addition, further regarding cleaning while in the tote, Hougham teaches that it has been conventional in the art to place de-cored leafy vegetables into containers. After placing into the containers, the leafy vegetables undergo a washing and drying and subsequent packaging step. Nevertheless, Hougham teaches extending the storage life of the vegetables by minimizing the factors that result in spoilage, such as microbiological decay, and handling damage (column 1, lines 25-27). To prevent handling damage, Hougham teaches placing the vegetables into a container which is then conveyed through a washing and drying system (column 2, lines 16-22 and lines 30-39). Based on these teachings, Hougham teaches the concept of keeping the food product within the container while washing, drying and packaging, for the purpose of minimizing the handling by the operator. Such a modification would further have extended the storage by preventing damage caused during handling of the produce from out of the container and into a washing cycle and then back into the containers for drying. Even further, Brown '850 further teaches that it was conventional to wash de-cored produce wherein the de-cored produce is placed into a container, washed within that container and transported in that same container (paragraph 0045 and 0046). Based on these teachings, it would have been obvious to one having ordinary skill in the art to wash the produce within the container for the purpose of minimizing the handling of the produce so as to prevent additional handling damage between processing steps.

Claim 1 further differs from the above combination in specifically reciting wherein the de-cored product is placed in a first row which faces a first side of the tote and the washing fluid flows through the de-cored end of each product to an opposite end of each product. It is noted, however, that Mitchell et al. teach placing the produce in a first and second row, which face a first and second side of the container, See figure 2B. It is further noted that Brown '850 simplified processing of produce, such as lettuce by placing initially placing the de-cored product in a tote and then washing and drying while in that tote. Brown '850 further teaches that the nozzles that are used to wash the de-cored produce are aligned in a row (Paragraph 0043). The reference to Cress et al. has also been cited as additional evidence that it has been conventional to wash and dry items in the same container without removing or handling the items between the washing and drying steps. Appellants also appear to minimize handling of the produce by washing and drying the produce while it is in the same container. Levey et al., show in figures 1 and 2, the conventionality of aligning items to be washed into rows and wherein the "cores" would face the washing jets. Garcia, Jr. similarly, show washed produced being aligned into rows (see figures), although not in containers. To therefore align the de-cored produce into rows so as to correspond with the aligned rows of washing nozzles would have been obvious to one having ordinary skill in the art, for the purpose of providing adequate washing of the cored produce. Regarding the limitation of the cleaning fluid flowing through the de-cored end of each product to an opposite end of each product, it is noted that Brown '850 and Brown et al. '865 teach wherein the washing fluid flows through the de-cored end of each product. Since the references are

performing the same de-coring process as appellant, the washing fluid would also have flowed through this de-cored end to an opposite end of the products.

As discussed above in the rejection relying on Brown '850 as the primary reference, claim 1 incorporates those limitations previously recited in cancelled claims 16-18. Mitchell et al. teaches an immersion tank (See Abstract and Column 1, Lines 44-48; column 3, lines 21-54) including a cleaning fluid. Mitchell et al. also teach flow of cleaning fluid directed toward the ends of the product. The combined teachings of Mitchell et al., Hougham, Brown ('850) and Brown et al. ('865), as discussed in the rejection relying on Brown '850 as the primary reference, teach washing de-cored produce in a tote and the flow of washing fluid directed toward the de-cored ends of the product. Mitchell et al. already teach employing a submersion for the purpose of washing lettuce. Hougham, Brown '850, Brown '865 further teach submersion for the purpose of washing produce such as de-cored lettuce. Since the art has recognized de-coring and washing the de-cored lettuce, by employing a submersion technique, it would have been obvious to one having ordinary skill in the art that the immersion would have resulted in a flow through the de-cored ends of the lettuce.

Regarding claim 2, the combination teaches cutting the core to remove the undesired sap as well for facilitating easier cleaning, as taught by Brown '850, Garcia Jr. et al., for instance. Regarding claim 4, the combination teaches processing the steps occurring at a processing plant. The combination teaches cleaning rows of de-cored produce within a container. Regarding claim 5, the whole head nature of the produce is

retained. Regarding claim 7, the combination teaches using a device to remove the core (see Tarantino et al.). This limitation reads on any device used to remove the core.

Claims 8 and 9 differ from the prior art in specifically reciting the step of pre-washing the cut product prior to placing in the tote and further comprising the step of spray washing at least one end of the product before placement in the tote.

Hougham teaches the step of pre-washing de-cored lettuce leaves by first spraying with a solution of fresh water and chloride to remove natural latex milky substance generated from the leave (Column 2, lines 17-23). Hougham further teaches that the first wash adds moisture to the leaves and increases the shelf life of the vegetable and also kills bacteria while also removing dirt and debris which accumulated on the product due to field handling (column 2, lines 24-29). After the pre-washing, Hougham subsequently places the tote within a washing step at the processing facility to remove insects, dirt and other debris which remains attached to the product following field processing (column 2, lines 40-42). Both Mitchell et al. and Hougham teach harvesting lettuce at a field and placing it into a container. Nevertheless, based on the teachings of Hougham, it would have been obvious to one having ordinary skill in the art to pre-wash the lettuce of modified Mitchell et al., as taught by Hougham for the purpose of removing the dirt and debris which accumulated during field handling. Also, such a modification would have extended the shelf life by adding moisture and also providing a bactericidal effect. Although Hougham discloses pre-washing after placing the lettuce within a tote, to pre-wash prior to placing into a tote would have been within the knowledge of the ordinarily skilled artisan for the purpose of forgoing the need to

drain the container of the dirt and residue from the washing. Such a modification would have also loosened dirt and other contaminants, thus resulting in efficient cleaning during the washing step. This is a similar concept to pre-scrubbing dirty dishes before placing in the dishwasher so as to ensure complete cleaning of the dish. Even further, since Hougham teaches the concept of pre-washing, whether the pre-wash was performed prior to or after placement within the tote would not have provided a patentable feature over the prior art, since Hougham teaches the concept of pre-washing for the removal of the accumulation of dirt, a bacteriocidal effect and extending the shelf life of the product by adding moisture prior to processing the lettuce at a processing plant.

Regarding claim 10, the combination teaches spray washing the product after placement in the tote and prior to transfer to a transport vehicle (see Brown '850, paragraph 0045).

Regarding claim 12, the above combination teaches washing, drying and packaging and further teach maintaining the whole head nature of the product. It is further noted that the tote employed by Mitchell et al. appears similar to the tote of shown in appellant's drawings, and thus would have retained the whole head nature of the de-cored product.

Regarding claim 15, based on the size of the totes (Figure 2A, 2B) it would have been obvious to the ordinarily skilled artisan to place multiple rows of the de-cored product on top of each other for the purpose of maximizing the efficiency of the washing and drying process. In any case, Mitchell et al. teach that it was conventional to wash

multiple rows, as shown in figure 9B. Mitchell et al. also teach that the products are stacked in the totes to dry (Column 2, lines 10-12). The references to Brown and Hougham already provide motivation for washing while in the tote. To therefore stack multiple rows on top of each other in the tote, for washing, would have been obvious for the purpose of maximizing the efficiency of the washing and drying process.

Regarding claim 19, Mitchell et al. teach a conveyance device to carry the tote of modified Mitchell et al. (See Figure 9B) through the cleaning tank.

Regarding claim 22, Mitchell et al. teach placing a tote comprising washed whole head produce into a spin dryer (Column 3, Lines 37-46). The spin drying of Mitchell et al. maintains the whole head nature during drying and after drying said whole head produce is packaged (Column 3, Lines 37-46).

Claim 33 is rejected for the reasons discussed above with respect to claim 1 and claims 8-12 and 16-17. Regarding claim 33 and the recitation of immersing the totes in a washing and drying without reloading the tote after washing, Hougham teaches placing leafy vegetables into containers and pre-washing, washing and drying without removing the vegetables from the container, for the purpose of preventing handling damage, as discussed above. It is noted that Mitchell et al. already teaches the particular type of dryer, such as a spin dryer. Based on these teachings, it would have been obvious to one having ordinary skill in the art to keep the produce of Mitchell et al. within the tote that was used to harvest the product and subsequently wash the produce within the tote for the purpose of minimizing the handling by an operator.

Regarding claim 34, Mitchell et al. teach packaging the produce (Column 3, Lines 34-35) after drying. Regarding instant claim 35, Mitchell et al. teach using chilled water (Column 5, Lines 1-12), and the Brown references similarly teach using an aqueous wash. Hougham teaches using chlorinated water (see abstract). Regarding instant claim 36, Mitchell et al. teaches the concept of maintaining registration of the produce with a first and second conveyor (Figure 9B). Mitchell et al. teach using the two conveyor belts to prevent bobbing of the produce while submerged. It would have been obvious to the ordinary skilled artisan that the fact that a tote has been used in modified Mitchell et al. would not have prevented bobbing of the tote. As used in modified Mitchell et al. the tote would also have been expected to "bob" depending on the amount of produce within the tote and the number of openings within the tote and the pressure of the water as well as the level of immersion. Therefore, to use a second conveyor, as taught by Mitchell et al., on the top of the tote would have been obvious for the purpose of securing the tote while the tote is submerged.

Regarding claim 37, the previous combination of references is silent in explicitly reciting a latching mechanism for securing the tote with the conveyor belt during the step of transporting. Nevertheless, to use stops for instance, to maintain the totes on the conveyor belt would have been obvious to one having ordinary skill in the art to prevent the totes from falling off of the conveyor belt. This would further have been obvious since such an incident would have resulted in stoppage of the entire automated process of washing the totes. Thus, based on this knowledge it would have been obvious to provide a securement mechanism that keeps the totes of modified Mitchell et

al. in communication with the conveyor belts. Such a modification would have prevented the totes from slipping off of the conveyor belts due to the forces imparted onto the tote as a result of washing.

Claims 38 and 39 are rejected for the reasons given with respect to claims 8-9. Claim 40 is rejected for the reasons given with respect to claims 1 and 16. That is, modified Mitchell et al. teaches washing de-cored produce while in the tote and Mitchell et al., further teaches immersing the produce for cleaning (column 5, lines 21-54). Again, claim 40 differs in maintaining the produce within the tote throughout the entire washing process. Mitchell et al. already teaches immersing the produce. The prior art to Brown and Hougham teaches the concept of maintaining the de-cored produce within the tote during washing, drying and transporting, and to therefore use the tote throughout the washing process would have been obvious for the reasons given above with respect to claim 1. Regarding claim 41, Brown '850 teaches a transport mechanism which carries the totes comprising the produce into a flow of washing fluid directed at the de-cored ends of the produce, as discussed above.

Claims 66 and 71 differ from the previous combination in specifically reciting wherein two rows of the de-cored product are placed within the tote. As discussed above, the prior art to Mitchell et al. already teaches two rows of produce being washed (figure 9B) but does not teach maintaining these rows in totes. Brown and Hougham teach maintaining the produce within totes while washing. Maintaining the produce in rows would also have been obvious for the reasons given with respect to claim 1. To therefore have two rows, side by side, would not have provided a patentable feature

over the prior art. Regarding claims 67 and 72, the combination already teaches washing fluid directed to two sides of the tote. For instance Brown '850 teaches spraying from the top and bottom, and Mitchell et al., teach spraying from the left and right sides. Claim 68 is rejected for the reasons given with respect to claim 19. Regarding claims 69 and 70, the combination teaches washing and drying the de-cored produce while being maintained within a tote and also immersing the tote, for the reasons given above with respect to claims 1 and 16. The claim 69 differs in reciting wherein the first side of the tote faces a direction of conveyance, while the de-cored product also faces the first side. It is noted that Brown '850 and '865 teach fluid flow from above and below the tote, and Mitchell et al. teach fluid flow from the left and right sides of the tote, however, Brown' 850 also teaches that the nozzles may be arranged in rows or any arrangement that adequately washes the trimmed produce. To therefore re-orient the produce so that the de-cored ends face a first side which is in the direction of conveyance would have been an obvious matter of design.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 1, 2, 4, 5, 7-10, 12, 15, 19, 22, 33-41 and 66-72, above in paragraph 8, and in further view of Hererra (US 20030217650), for the reasons given above in the similar rejection of claim 6 in further view of Hererra as applied to the rejection relying on Brown '850 as the primary reference.

10. **Claim 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 1, 2, 4, 5, 7-10, 12, 15, 19, 22, 33-41 and 66-72 , above in paragraph 8 and in further view of Terry (US 5711980), for the reasons given above in the similar rejection of claim 24 in further view of Terry as applied to the rejection relying on Brown '850 as the primary reference.**

Claim Rejections - 35 USC § 112

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 10 recites the limitation "transport vehicle." It is not clear as to how the term vehicle is used. That is, is a vehicle similar to a transport mechanism that moves the totes into a washing tank?

(10) Response to Argument

- On pages 7-8 of the Appeal Brief, appellants urge that the term "transport vehicle" is supported on page 17, lines 6-17 of the specification, wherein the step of transporting the produce from the field to the processing plant is described. Thus, appellants urge that the term "transport vehicle" is not the same as "transport mechanism" which has been used to describe the device to transport the tote through the washing device."

This urging has been considered but is not persuasive. It is noted that the claim only recites "spray washing the product after placement in the tote and prior to transfer to a transport vehicle." Although appellants' specification discloses that "transport mechanism" reads on conveyor belts, for instance, the specification does not define "transport vehicle" and thus reads on conveyor belts as transport vehicles, as well. Especially in light of the disclosure of the specification, a conveyor belt would still read on the limitation "transport vehicle," since claim 10 is referring to the "washing" step that can be performed after placing the products into a tote, but before placing on a "transport vehicle" that provides subsequent washing and/or drying steps.

- On pages 8-9 of the Appeal Brief, appellants urge that the examiner has employed hindsight reconstruction to arrive at appellants claimed subject matter. For instance, on page 9 of the Appeal Brief, appellants urge that

"...the Office Action has failed to articulate, with rational underpinnings, why one of skill in the art would be able to view of the cited prior art and know how to combine them without reliance on the Appellants' teachings. One of skill in the art would have to not only figure out which elements to combine, but also which elements, among the vast number in the prior references, should not be combined."

This urging has been considered but is not persuasive. In response to appellants' argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the

time the claimed invention was made, and does not include knowledge gleaned only from the appellant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Furthermore, it is noted that the concept of minimizing handling by performing a separate de-coring step with subsequent placement into a tote which is subsequently washed and dried has been a conventional concept in the art, as evidenced by Brown '850, Cress et al. and Hougham. Nevertheless, appellants also appear to indicate that the purpose of the totes is for minimizing handling of the produce after de-coring and loading into totes, which subsequently facilitate washing and drying of the produce. Therefore, the art teaches that if one desired to minimize handling of the produce after de-coring, then it would have been obvious to have performed a washing and drying step while the de-cored produce was within a container that allowed for washing and subsequent drying of the produce. Additionally, it is noted that references such as Tarantino et al. and Garcia Jr. clearly teach washing de-cored produce such as lettuce, by allowing the washing medium to flow through the de-cored produce. These references also teach employing structured arrangements of the de-cored produce, for the purpose of washing the de-cored produce. Additionally, Brown et al. '865 teaches wherein the de-cored lettuce are all aligned in a row and correspond to the spray nozzles, also aligned in a row, for the purpose of cleaning the de-cored lettuce (column 2, lines 35-42). Mitchell further teaches that appellants were not the first to arrange two rows of produce for the purpose of washing. Since Brown '850 already teaches placing de-cored produce into a tote and further teaches washing the de-cored produce, to

employ a particular conventional arrangement of the de-cored produce would have been an obvious matter of choice and/or design, for the purpose of facilitating cleaning of the produce. Thus, appellant is not the first to de-core lettuce, place the lettuce in a tote and wash the lettuce while in a tote.

In addition, it is noted that Mitchell '429 has been relied on to teach the concept of washing produce by aligning the produce for allowing the washing medium to flow there-into. The claim differs in reciting placing de-cored lettuce into a tote prior to this washing step. Nevertheless, Brown '850 teaches that it has been a conventional expedient to de-core and then place lettuce into a tote for further processing such as washing and drying. Hougham further evidences that it has been a conventional process in the art to place produce having its core removed into containers such that produce without the cores has been washed, dried and packaged within this same container with the advantage of minimizing handling damage (column 1, lines 25-27). Brown et al. '865 teaches wherein the de-cored lettuce are all aligned in a row and correspond to the spray nozzles, also aligned in a row, for the purpose of cleaning the de-cored lettuce (column 2, lines 35-42). Therefore, to modify Mitchell '429 and first core and place into a container and subsequently wash and dry would thus have been obvious to one having ordinary skill in the art, for the purpose of minimizing produce damage due to handling. Furthermore, since Brown '850 already teaches washing de-cored lettuce while in the container, it would have been obvious to the ordinarily skilled artisan that eliminating the two steps of placing lettuce onto a conveyor and

subsequently placing the lettuce into container for drying would have further facilitated minimizing damage due to handling of the lettuce.

Regarding the flow of washing fluid flowing through the de-cored ends, it is noted that obviously, since Mitchell '429's lettuce has not been cored, the washing fluid would not have been expected to flow through de-cored ends. However, Brown '850, Brown '865 and Hougham teach the advantages of first de-coring for the purpose washing and removing the sap present in the lettuce while also minimizing handling, as discussed above.

Additionally, it is noted that the art has taught that it has been conventional to de-core product and flow a fluid into the de-cored portions, for the purpose of cleaning the de-cored portions. The art teaches performing such steps while the de-cored produce is within a container, as taught by Brown '850 and further evidenced by Garcia Jr. and Tarantino, and in further view of Brown '865, Mitchell, Levey et al. and Cress. The art even teaches that it has been conventional to arrange the product into a plurality of rows. Since Brown '850 already teaches washing de-cored produce using sprays from above and below and a submersion tank, and since Mitchell, Brown '865, Levey et al. and Cress teach rows and washing rows of produce, to thus arrange the de-cored product of Brown '850 into rows such that fluid can flow through the de-cored portions would thus have been obvious to one having ordinary skill in the art, for the art recognized function of washing the de-cored product while it is still in the container.

- On page 10 of the Appeal Brief, appellants urge that Brown '850 "fails to disclose that the de-cored produce is arranged in any particular order in the

totes." Appellants further urge that "since the products are later sprayed with water from 'above and below' (para. 0043), there is no disclosure that the washing fluid necessarily flows from the de-cored end to an opposite end." Appellants also urge that Brown fails to disclose using a washing tank as recited in claims 1, 33 and 69.

These urgings have been considered but are not persuasive. It is noted that the secondary references teach appellants' particular arrangement of the produce. Since the art already recognized rows of spray nozzles above and below the container comprising the de-cored lettuce, the particular arrangement of rows of de-cored lettuce would have been an obvious function of the particular arrangement of the spray nozzles. In viewing Mitchell, it is noted that the spray nozzles allow fluid to flow toward the produce from the sides. With this in mind, to thus arrange de-cored produce in first and second rows, such that the spray from the sides would have washed the de-cored product would thus have been an obvious function of the position of the spray, which would have been an obvious matter of choice and/or design. It is further noted that Brown '850 teaches submersion of the containers in a liquid (paragraph 0043). Thus, teaching a wash tank. Furthermore, by placing the container comprising de-cored product onto a conveyor which submerges the container, clearly, the washing fluid would have flowed through the de-cored end of each product. It is further noted that the flow of washing would also have been toward the de-cored ends of the produce simply as a result of the fluid properties of the washing fluid: that is, because of the fluidity of the washing liquid, there would have been a flow towards the de-cored ends. Also, using sprays, the flow of fluid would have been toward the de-cored ends of the produce. Clearly, providing a flow of fluid, whether through a wash tank or using spray

nozzles, the art has recognized that flowing a fluid through the de-cored ends of the produce would have been advantageous for cleaning the de-cored portions.

- Further on page 10 of the appeal Brief, Appellants urge that "the examiner seems to equate spraying water from both the top and the bottom as teaching the washing fluid necessarily flows from the de-cored end to an opposite end, since at least one set of nozzles would necessarily be spraying in the correct direction. However, the Brown reference must be taken as a whole, and there is nothing in it to suggest which set of nozzles (the upper or lower) could be removed. The Brown reference also actually teaches away from the present invention by failing to disclose the need/desire for a wash tank or immersing in a washing fluid and instead teaches that spraying the produce is sufficient."

These urgings have been considered but are not persuasive. As discussed in the rejections above, the Brown '850 teaches that the sap from the de-cored portions of the product is allowed to drain. Then, spray nozzles from above and below wash the de-cored produce. Brown '865 teaches de-cored lettuce arranged/aligned in a row, corresponding to spray nozzles, which spray the de-cored lettuce. Garcia Jr. further evidences cleaning the de-cored lettuce heads for allowing the cleaning spray to flow through the de-cored portions. Therefore to modify Brown '850 and arrange rows of spray nozzles such that they can flow fluid through the de-cored portions would have been obvious to one having ordinary skill in the art, for the purpose of cleaning the de-cored portions of the produce. It is noted that Brown '850 even teaches the use of a submersion tank (paragraph 0043). Regarding appellants' urging of "removing" the correct set of nozzles, it is noted that Brown teaches using nozzles that are above and below and also teaches the use of a submersion tank.

- Further on page 10 of the Appeal Brief, appellants urge that Brown '865 fails to teach or disclose placing the de-cored heads into a tote and immersing the totes in a wash tank and/or wash fluid but rather only teaches spraying the produce with an aqueous solution.

These urgings have been considered but are not persuasive, since Brown '865 has been relied on to teach aligning the de-cored lettuce with the spray nozzles for the purpose of cleaning the de-cored lettuce, and further for teaching the step of cutting to remove the core of the lettuce, while retaining the whole head nature of the lettuce.

- Further on page 10 of the Appeal Brief, appellants urge that Garcia fails to disclose placing totes in a washing fluid and that spraying produce is not the same as placing the produce in a washing fluid such that washing fluid flows through the de-cored ends.

This argument has been considered but is not persuasive. It is noted that Garcia has not been relied on for placing the produce into a washing fluid as claimed. It is noted however, that Garcia does teach that the core of the lettuce is removed, as shown in figure 5, such that a flow of washing fluid from above and below would flow through the de-cored lettuce, for improving the washing of the lettuce.

- Further on page 11 of the Appeal Brief, appellants urge that Tarantino et al. discloses a conveyor belt system for transporting produce. Techniques for topping and/or coring produce are also disclosed. However, there is no

disclosure of de-coring produce and placing the produce in a particular orientation for washing in a washing fluid/wash tank.

These urgings have been considered but are not persuasive, since Tarantino et al. has only been relied on as further evidence that it has been conventional to remove the core from lettuce, while still retaining its whole head nature. Tarantino et al. has been further relied on to teach that it was conventional in the art to have a horizontal spray (figure 3c) for the purpose of treating both the de-cored end and the top end of whole head produce such as lettuce.

- Further on page 11 of the Appeal Brief, Appellants urge that "Mitchell fails to disclose placing the de-cored products into a tote, and aligning the de-cored ends against a side of the tote. As clearly shown in figure 2B of the Mitchell reference, the core ends (the ends are not even 'de-cored' ends) are placed towards the center of the tote, facing each other in two rows. IN contrast, as shown in Figs 6(a) and 6(B) of the present application, the de-cored ends are placed against the side of the tote (either in one or two rows, as shown in the figures). Moreover, since the products of Mitchell are not de-cored, the washing fluid cannot flow through the 'de-cored ends' of the products. Again, in order to 'create' relevance for this reference, the Examiner has merely conveniently selected certain aspects of the reference, and ignored others."

These urgings have been considered but are not persuasive. It is noted that Mitchell, as a secondary reference, teaches that it has been conventional to arrange produce, such as lettuce in rows, as shown in figure 2B, for the purpose of facilitating centrifugal drying (since the moisture would flow out through the open ends of the lettuce). Mitchell further has been relied on to teach aligning the product in a similar arrangement (without the container) for the purpose of allowing a washing medium to flow into the produce. Nevertheless, in view of Brown '850, Brown '865, Tarantino et al.

and Garcia Jr., who all teach allowing the washing fluid to flow through de-cored produce and since Brown '850 even teaches washing de-cored lettuce while the lettuce is in a container, to thus arrange the lettuce in the container of Brown '850 as taught by Mitchell have been obvious to one having ordinary skill in the art, since this arrangement would further have facilitated centrifugal drying. Additionally, Brown '850 already teaches cleaning de-cored lettuce by placing a tote onto a conveyor and carrying through a wash tank and even further teaches removing excess water (i.e. drying) by using vibration to shake water off of the lettuce, while it is still in the container. Brown '850 further teaches minimizing handling after de-coring by washing and drying while still in the same container. Since Brown '850 already teaches placing de-cored produce into a tote and further teaches washing the de-cored produce, to employ a particular conventional arrangement of the de-cored produce would have been an obvious matter of choice and/or design, for the purpose of facilitating cleaning of the produce. Thus, appellants are not the first to de-core lettuce, place the lettuce in a tote and wash the lettuce while in a tote.

As a primary reference, Mitchell washes the produce while in a plurality of rows, but is silent in washing de-cored produce arranged into a plurality of rows, while the produce is contained within totes. Nevertheless, the secondary references to Brown '850, '865, Garcia Jr. et al. and Tarantino et al. have been relied on to further teach that it has been advantageous to de-core produce so as to remove the sap therefrom and to facilitate cleaning of the de-cored portion. The art even teaches that initial placement after de-coring, into containers further minimizes handling and thus reduces the

frequency with which the produce could have been damaged or contaminated. Therefore, to de-core and then wash the produce while in a container would have been obvious to one having ordinary skill in the art, for the purpose of minimizing handling throughout the washing, drying and other processing steps.

- On pages 11-12 of the Appeal Brief, regarding the rejections of claim 6 in further view of Herrera; claims 8-10, 12 and 15 in further view of Hougham, Busta, Crossett, Bell et al. and Alameda; and claim 24 in further view of Terry appellants essentially repeat those urgings discussed above.

These urgings have been considered but are not persuasive, for the reasons given above.

- On page 12 of the Appeal Brief, Appellants urge that the "Hougham reference is directed to a technique whereby leafy vegetables have their leaves torn from the vegetable stems and then the leaves are sorted into separate baskets." Appellants urge that "Hougham utterly fails to provide any disclosure to support the rejection of the present claims. In fact, most of the citations for support of the rejection do not make sense. For example, what is a 'de-cored' end of a leaf, such that the fluid is directed to the de-cored end? The baskets are clearly not 'totes', de-cored products are not arranged in any particular order and the washing fluid does not pass through the product in any particular direction."

These urgings have been considered but are not persuasive. It is noted that Hougham has been relied on to teach that it has been conventional in the art to employ a pre-washing step for the purpose of further facilitating cleaning of the produce. Furthermore, it is noted that although the products treated by Hougham might not be the de-cored lettuce as recited by appellants, Hougham does teach removing the core from

produce and subsequent placement of produce into container which can be used for washing, drying and packaging of the produce for the purpose of minimizing handling of the product. Thus, whether Hougham treated the same product as appellants or not, the reference teaches appellants' concept of providing a container into which a product that has had its core removed has been placed and within which the product can be washed, dried and packaged for the purpose of minimizing damage to the product as a result of handling the produce during these processes, and Hougham teaches pre-washing for removing dirt and other contaminants prior to the subsequent processing steps.

- On page 13 of the Appeal Brief, regarding the rejections of claim 37 in further view of Fox et al.; claims 38-39 in further view of Hougham, Busta, Crossett, Bell et al. and Alameda; and claim 24 in further view of Terry appellants essentially repeat those urgings discussed above.

These urgings have been considered but are not persuasive, for the reasons given above.

- Further on page 13 of the Appeal Brief, regarding the rejection relying on Mitchell et al. as the primary reference, appellants essentially repeat those urgings discussed with respect to the rejections relying on Brown '850 as the primary reference.

These urgings have been considered but are not persuasive, for the reasons given above.

- On pages 13-14 of the Appeal Brief, regarding the rejections of claim 6 in further view of Herrera; and claim 24 in further view of Terry appellants essentially repeat those urgings discussed above.

These urgings have been considered but are not persuasive, for the reasons given above.

- On page 14 of the Appeal Brief, appellants urge that a key failing of the combinations cited by the Office Action is that, taken as a whole, the references do not teach arranging the de-cored produce in a specific direction in totes, such that when immersed in wash tanks, the washing fluid can flow in a specific direction through the produce.

This urging is not persuasive, in view of the discussion above. It is noted that the references clearly teach washing de-cored produce wherein the produce are arranged in a particular direction such that washing fluid can flow into the de-cored portions, as taught by Brown '850, Brown '865, Garcia Jr. and Tarantino et al.. Brown '850 even teaches employing a submersion tank for this purpose. Nevertheless, to allow the fluid to flow through the produce would have been obvious to the ordinarily skilled artisan for the purpose of cleaning the de-cored portion. The art already teaches the container comprising the produce being placed on a conveyor which would pass the produce through a spraying zone or submersion tank (see Brown '850) for instance. Nevertheless, when employing a submersion tank, fluid would inherently have flowed through the de-cored portions of the produce.

- Further on page 14 of the Appeal Brief, appellants urge that, "these references do not disclose arranging the de-cored products in such a way that the de-cored ends face against a side of the tote. Nor do these references disclose that the washing fluid is specifically directed to flow through the de-cored end. Therefore, these references clearly do not anticipate the present claims."

These urgings have been considered but are not persuasive. It is noted that the limitation "facing against a side of the tote" reads on the de-cored ends facing the bottom of the tote, since the bottom is still a side of the tote. Furthermore, it is noted that the art teaches that sprays of fluid would flow through the de-cored portions of the produce, for washing the de-cored portions. See Brown '865 and Garcia (column 4, line 64 to column 5, line 10), as discussed in the rejections above. It is also noted that in view of these teachings, that the particular orientation of the rows and the flowing of fluid through the de-cored ends would have been obvious to one having ordinary skill in the art, for the purpose of cleaning de-cored ends of the produce, while the produce remains inside of a container.

- Further on page 14 of the Appeal Brief, appellants urge that "despite the citation and combination of 15 different references, the Office Action has failed to provide a specific citation to a reference which loads de-cored products into a tote with the de-cored edges facing against a side of the tote, and directing the washing fluid through the de-cored end. This factor alone tends to show that the present invention is not obvious in view of the prior art. Additional limitations not disclosed include conveying the tote through a wash tank with the de-cored ends in the direction of conveyance. Moreover, the references fail to disclose loading the de-cored products into two rows, with the de-cored ends facing the side of the tote."

These urgings have been considered but are not persuasive. It is noted, as discussed in the responses above, that the art teaches minimizing handling of the produce after harvesting of the produce through the use of a container that can be used to wash and dry the produce.

Regarding the arrangement of the de-cored produce in a specific direction on the totes, it is noted that appellants' claims only recite that the de-cored ends face a side of the tote. Regarding Brown '850, it is noted that since the washing sprayers employed for washing the de-cored lettuce are above and below the de-cored lettuce, then it would have been obvious that the de-cored lettuce within the tote would have faced a side, such as the bottom of the tote. Regarding the particular arrangement of the de-cored produce, it is noted that references such as Garcia Jr., Brown '865 and Tarantino et al. all teach a uniform arrangement of the produce on a conveyor. The claims differ from these references in employing a tote when uniformly arranging the produce. Nevertheless, Mitchell et al. teaches employing the same arrangement when washing and drying the lettuce. To therefore employ this arrangement would have been obvious to one having ordinary skill in the art, since Mitchell et al. teaches that this particular orientation of rows of lettuce facilitate drying when spin drying. To therefore arrange the de-cored lettuce into a particular alignment within a tote, would thus have been an obvious to one having ordinary skill in the art for the purpose of facilitating spin drying, for instance. Additionally, it is noted that since the art already teaches washing the inside of de-cored lettuce, it would also have been obvious common sense, that if one desired to simultaneously wash multiple de-cored lettuce heads in a single washing

pass, to align the holes of the multiple de-cored lettuce heads so as to allow the washing fluid to flow there-through, for the purpose of improving the efficiency of the washing process.

Regarding appellants urging with respect to the de-cored produce facing a side of the tote, the claims are not specific as to what side is being claimed and thus by teaching the bottom of the container, the art teaches the de-cored produce facing a side.

Regarding appellants urging with respect to the flow of the washing fluid through the de-cored end, it is noted that the art teaches de-coring lettuce such that a hole is present through the center of the lettuce (where the core would have been). The art also teaches employing jets to spray washing fluid for washing from above, and below while still washing the core, as evidenced by Garcia Jr., for instance. If one immersed the tote into an immersion tank, which Brown '850 already teach, then it would have been obvious that upon submersion, the washing fluid would have flowed through the de-cored ends of the produce.

The art teaches de-coring produce and flowing fluid through the de-cored portions, for the purpose of better cleaning the sap containing portion of lettuce. The art even teaches employing a conveyor for the purpose of passing the container having the produce therein, to subsequent processing steps. The art also teaches the arrangement of produce in two rows for the purpose of washing and for the purpose of facilitating centrifugal drying. Therefore, appellants' particular steps have been conventional steps employed by the art for the purpose of washing de-cored produce

and for minimizing handling of produce by keeping the produce arranged within a container. Each of these steps is taught by the references or would have been obvious in view of the teachings of the references for their art recognized function, as discussed in the rejections above.

- Further on page 14 of the Appeal Brief, Appellants urge that "the examiner has argued that 'one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.' However, this is exactly the problem with the examiner's rejections - they are based on selecting individual elements from a multitude of reference without support for why such a combination would, in fact, be obvious. The patent office cannot have it both ways - select individual elements from different references to show obviousness, while objecting to arguments which point out the problems with each reference, when taken as a whole (i.e. teaching away, etc).

These urgings have been considered but are not persuasive. It is noted that the art teaches de-coring produce, such as lettuce because cores can be undesirable. The art further teaches allowing the sap/latex to drip out from the core and then teaches washing the de-cored lettuce because, obviously, dirt and debris (and sap) should be washed away from the lettuce for sanitary/freshness purposes (Brown '850, '865, Hougham, Garcia Jr. et al., Tarantino et al.). The art teaches motivation for employing appellants' claimed arrangement, such as for facilitating spin drying (Mitchell '429). The art also teaches that it has been conventional to employ aligned / uniform arrangements of de-cored products for the purpose of facilitating the washing of these cores (Brown '850, '865, Garcia Jr. et al., Tarantino et al. and Levey et al.). Finally, the art teaches minimizing handling of produce during the washing, drying and packaging steps, for the

purpose of minimizing damage to the produce, which also appears to be one of appellants' purposes. Therefore, it is noted that appellants' process of placing produce that has been de-cored into a container and subsequently washing and drying while in said container has already been taught by the art to be advantageous for the purpose of preventing damage that could be caused by handling and for facilitating cleaning of de-cored produce.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Viren Thakur/

Examiner, Art Unit 1782

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Steve Weinstein

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